REMARKS

After the foregoing amendments, claims 10-21 are currently pending in this application. Claims 10-21 have been amended to more distinctly claim subject matter which the Applicants regard as the invention. The Applicants submit that no new matter has been introduced into the application by the amendments.

The Present Invention

The present invention is a method of simulating the performance of a communication system which provides a plurality of timeslots for supporting transmissions that are received and transmitted by a plurality of users. The possible realizations of a system configuration are simulated by performing a plurality of snapshots at specific instances of time.

In one embodiment, a current snapshot is started with an empty simulated system where no user is present. A new candidate user is selected for consideration of admission to the simulated system. An interference level of the new candidate user is computed in each of the timeslots. A first algorithm is invoked to determine whether the new candidate user should be admitted in the simulated system based upon the computed interference levels. If the first algorithm determines that the new candidate user should be admitted in the simulated system, at least one timeslot is allocated to the new candidate user, a transmission power level is computed for the new candidate user based on the computed interference level in the at least one allocated timeslot, and a power balancing process is performed to update the transmission power levels of all users admitted in the simulated system. If there are any additional new candidate users to consider for admission to system and, if so, the above procedure is repeated. The current snapshot ends if there are no more new candidate users to consider for admission to the simulated system.

In another embodiment, the simulated system is already being used by a plurality of admitted users during a current snapshot of the simulated system. An interference level of the new candidate user is computed in each of the timeslots based on transmission power levels of the admitted users. A first algorithm is invoked to determine whether the new candidate user should be admitted in the simulated system based upon the computed interference levels and the transmission power levels of the admitted users.

Claim Rejections - 35 USC § 102(e)

Claims 10-21 are rejected under 35 U.S.C. §102(e) as being anticipated by Hedlund et al. (U.S. Patent No. 6,934,268), hereinafter referred to as "Hedlund").

Hedlund discloses a method for allocating and controlling downlink power in a telecommunication system. The Examiner asserts that "Hedlund discloses a method of simulating the performance of a communication system." The Applicants strongly disagree. The portions relied upon by the Examiner disclose actual base station equipment (see Figure 1) and a method that is performed centrally at a base station in which real power request commands received from user equipments that have established a communication connection to the base station are analyzed and evaluated (see Figure 1 and col. 4, lines 14-19).

Additionally, claim 10 recites a method step of starting a current snapshot with an empty simulated system where no user is present. Unlike the features of the invention recited by claim 10, Hedlund discloses a real-life communication system, not a simulated system, where there are a plurality of users present at all times (see Figure 1 and col. 4, lines 14-19).

Unlike Hedlund, the claimed invention is related to a method of simulating the performance of a communication system. As amended, claims 10 and 16 now recite that the method comprises simulating possible realizations of a system configuration by performing a plurality of snapshots at specific instances of time. Furthermore, claims 10 and 16 have been amended to clarify that they are related to a simulated system.

Furthermore, Hedlund fails to teach or suggest that if the first algorithm determines that the new candidate user should be admitted in the simulated system, the following three (3) steps are performed: 1) at least one timeslot is allocated to the new candidate user, 2) a transmission power level is computed for the new candidate user based on the computed interference level in the at least one allocated timeslot, and 3) a power balancing process is performed to update the transmission power levels of all users admitted in the simulated system.

Finally, Hedlund fails to teach or suggest computing an interference level of a new candidate user in each of a plurality of timeslots, whereby a first algorithm is invoked to determine whether the new candidate user should be admitted in the simulated system based upon the computed interference level. Hedlum discloses that a high interference level may occur due to having to many user equipments, whereby it is determined that a plurality of users will suffer from a decrease of transmission power in a case of congestion based on a single signal-to-interference ratio (SIR) measurement. Nowhere does Hedlum disclose computing an interference level in a plurality of timeslots for determining whether a single candidate user should be admitted in a simulated system.

Regarding the Examiner's rejection of claims 11-15 and 17-21, these claims are dependent upon claims 11 and 16, respectively, and are believed to be allowable for the same reasons presented above.

In view of the arguments presented above, the withdrawal of the rejection of claims 10-21 under 35 U.S.C. §102(e) is respectfully requested.

Conclusion

If the Examiner believes that any additional minor formal matters need to be addressed in order to place this application in condition for allowance, or that a telephone interview will help to materially advance the prosecution of this application, the Examiner is invited to contact the undersigned by telephone at the Examiner's convenience.

In view of the foregoing amendment and remarks, the Applicants respectfully submit that the present application, including claims 10-21, is in condition for allowance and a notice to that effect is respectfully requested.

Respectfully submitted,

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